where it flows for another 414 kilometers. In this part the Selenga is 133
200 to 450 meters wide and has a mean depth of 1.6 meters. The 505
mean velocity reaches 5.6 to 8.5 kilometers per hour. Apart from a bar off the mouth, which makes entrance into the river difficult, there are no large hindrances here, and accordingly the Selenga can be designated as completely navigable in this part. Occasionally smaller steamers travel 480 kilometers into Mongolia during the high water period in the summer. The period when the river is navigable lasts exactly half a year. The water level during this period fluctuates approximately 2 meters as a mean. Regular steamer shipping /194/ has developed as far as Ust'-Kyakhta. The tributaries are traveled as needed. The largest tributaries are the Chikoy, which is more than 740 kilometers long and is navigable by ship for 249 kilometers; the Khilok, which is 742 kilometers long; and the Uda, which is 403 kilometers long. The center of water transportation is Ulan-Ude, where [504] there is also a dockyard for steamers and barks. In connection with the Selenga there is also water transportation on Lake Baykal and on the Angara as far as Irkutsk. The total number of steamers here in 1930 was 87, and the total number of barks was 185 in contrast to only 13 steamers and 18 barks in 1912.

The importance and the capacity of water transport on the 505
Amur exceeds that of the Selenga by several fold. The following table gives a comparison:

Water Transport 1939
in 1,000 tons

	Total	Oil	Wood		Grain	Mineral Construction Materials	Salt
			By ship	By raft			
Selenga	200	7	7	91	45	14	1
Amur	1,305	191	11	645	186	65	13

Air Transport

Air transportation was early introduced into the entire Far Eastern 509
region to overcome the great distances. The main line coming from Moscow leads via Chita and Khabarovsk to Vladivostok. Beside the direct line, flights are made along this stretch to the following localities: Ulan-Ude, Chita, Nerchinsk, Mogocha, Skovorodino, Tygdinsk, Svobodnyy, Arkhara, Birobidzhan, Khabarovsk, Bikin, Iman, Voroshilov,

509 and Vladivostok. An important line leads from Ulan-Ude to Ulan Bator in the Mongolian People's Republic with a stop en route in Kyakhta. Khabarovsk can be named as the special center of air transport. From here the air lines go the north. Regular flights are made to Komsomol'sk, Okha and Aleksandrovsk on Sakhalin, then to Ayan, Okhotsk, Petropavlovsk on Kamchatka, and Anadyr' in the extreme northeast. However, the air transportation also performs purely economic tasks. Thus regular flights are made to the gold fields on the upper Barguzin from Ulan-Ude and to the gold regions on the upper Vitim (Tsipikan) from Chita. Also the polar stations along the coast of the Arctic Ocean are supplied by airway. Beyond the regular lines, occasional flights are also made into the remotest regions. In the summer seaplanes are also used; they fly along the great rivers and can go down on the water at all times and everywhere. In winter, on the other hand, airplanes are used which are equipped with gliders /Gleitscheinen/ which enable the planes to land on slick ice and snow surfaces.

/195/ Tranportation of the North

489 The vastness and the slight population of the entire vast north has made it unnecessary to build routes apart from some few overland roads; and accordingly the entire area can be designated as without routes of any kind. Traffic here is accomplished within moderate limits on natural routes through the forests, on narrow paths through the mountains, and in the open tundra areas via the open plains. As a consequence of the great dampness and the heavy formation of swamps, all forms of land transportation cease in summer in many places, and transportation is then limited to boat traffic on the rivers, which during this season offer the best means of transportation. Many localities are often cut off from the outside world for weeks and months. The transportation of goods is completed primarily in the winter, which constitutes the main traffic period for the entire north. These pathless regions begin already in the northern part of the Amur region, and in the Amgun area even reach the Amur itself. Characteristic [493] for these regions is the sled as the main means of transportation, while the characteristic draught animal is the reindeer or dog, or less commonly the horse. These are means of transportation such as have been developed by the native Tungus and Paleoasiatics; and they have to be used also by the Russians for trips and for the transport of goods, because in the present state of development there are just no other possibilities for transportation.

316 [491] [509] Land road connections also exist toward the south via Romanovskoye on the Vitim to Chita. A rapid and continuous means of transportation has recently been ensured by an airline, which is flown regularly and which connects Chita with Tsipikan, the center of the northern gold district.

133 To the north of the Tsipa-Bambuyka valley rises the Muya mountain country, which is divided into two long ridges by the river of the same name which flows toward the northeast to the Vitim. These two long ridges are the Southern Muya Mountain Range and the Northern Muya Mountain Range. The northern border of the latter is formed by the extended valley of the Upper Angara, which flows toward the west-southwest to Lake Baykal.

The Southern Muya Mountain Range, a mighty, massive horst, forms the watershed between the Tsipa and the Muya. It has a raw, wild appearance with a ridge of numerous gol'tsy, with an entire series of heights, crowned with snow, rising over 2,000 meters. The picture of the entire mountain range, however, is not unified, and the wealth of varying forms is determined by the change in the rock. The former root surface is, to be sure, heavily destroyed, but it is still always recognizable. In the higher places traces of an old glaciation are to be found everywhere in the form of circus /circular?/ valleys/Zirkustäler/, trough valleys, round basin lakes /Karseen/ and basin moors /Karmooren/, and, in the valleys, deposits of boulders and rubble. Because the Muya Valley lies at the slight altitude of 450 to 600 meters, the slope toward the north is much sharper than the slope toward the south to the Tsipa Valley, which generally has a height of more than 900 meters. The passes are difficult, small in number, and 1,450 to 1,700 high. From the swamps at the foot of the mountain range rise slopes covered with thick taiga. Here the ascent into the narrow valleys overgrown with shrubs is especially difficult. Only at heights where the vegetation discontinues, is there an opportunity for free movement.

The valley of the Muya is determined tectonically as a depression. It attains a width of up to 30 kilometers. A mixture of deposits of old and recent date makes the valley plain appear rich in variety. Hills, long embankments, sand bars with closed off lakes, in between swamps and moors displace one another. Terrace formations on the border of the valley and widely diffused lake sediments permit the basin of a former lake to be recognized in the valley.

The Northern Muya Mountain Range, likewise a horst, is

133 northern edge it represents.

The Oldoy Highland is the smallest part of the region as a whole, and it comprises the area between the Yankan Mountain Range and the Amur. Already from the region around the source of the Oldoy toward the south the landscape flattens out and dissolves into individual ridges, mountains, and valley areas, giving the overall impression of a mountainous and hilly landscape. Toward the southeast, between the Urkan and the Amur, the broad hill ridges gradually disappear altogether, and the landscape here flows into the so-called Amur-Zeya plateau, which already belongs to the greater landscape of the Zeya-Bureya plain area.

491 The Oldoy Highland is traversed in the north by the Amur
496 Railroad, from which a railroad line to the Amur harbor of Dzhalinda branches off in Skovorodino (more than 20,000 inhabitants), the seat of a railroad office. Thus, in terms of transportation, this region is quite well opened up. This is also true of the most heavily populated parts within the overall region. The alluvial sands of the rivers to the north of the Amur Railroad, especially the valleys of the upper Oldoy, and of the Great and Lesser Urkan, are rich in gold. The built-up highway which is mentioned above and which can be used throughout the year, leads from the station of Never (around 10,000 inhabitants). This highway crosses the Tukuringra Mountain Range and the Stanovoy in its western part and goes via the Aldan gold fields to Yakutsk. It reaches Tyndinsk in the area around the upper course of the Gilyuy. This important highway has recently been supplemented by a railroad line from Skovorodino to Tyndinsk, where there is a spur to the great Baykal-Amur Railroad (BAM). With this a direct cross-connection between the Amur shipping and the BAM is supposed to be created. The new railroad line, in addition, opens up new areas for settlement, just as the construction of the Amur Railroad has become a pacemaker for heavier settlement by an agricultural population. Also in the less swampy valley areas between the railroad and the Amur River agriculture is
361 pursued relatively actively. Accordingly, a lively food industry and also machine building shops and repair shops have been able to develop in Skovorodino, which has already been named as the center of the Oldoy Highland. Brown coal, which is mined in the vicinity, is used as the raw material for energy. To the north of the city tin supplies
[509] have been determined. An airfield in the vicinity connects Skovorodino to the great airline running from Moscow to Khabarovsk to Vladivostok.